AFFYMETRIX®

Data Sheet

GeneChip® CYP450 Assay

Genotyping of the Human 2D6 and 2C19 Genes Encoding the Cytochrome p450 Enzymes

- Sense and antisense strand analysis in a single hybridization reaction
- Simultaneously genotypes 18 known mutations defining 10 alleles of the CYP2D6 and 2 alleles of the CYP2C19 genes
- Discriminates homozygous and heterozygous genotypes

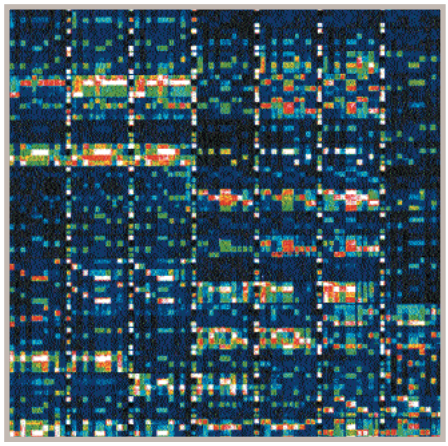
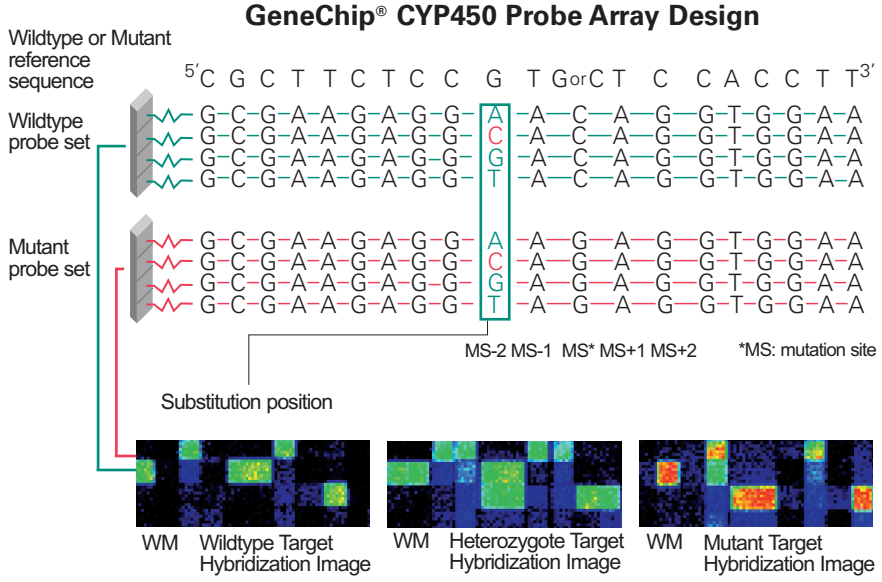


Figure 1. For each known mutation site, there is a block containing five columns of probes designed to be complementary to wildtype sequence (W) and five columns of probes designed to be complementary to mutant sequence (M). The five columns interrogating wildtype sequence are inter-digitated with the five columns interrogating the mutant sequence such that each pair of columns of probes interrogates the same nucleotide position in the target sequence. Each pair of columns successively interrogates the target nucleotide sequence from two bases upstream of the mutation site (MS-2) to two bases downstream of the mutation site (MS+2). Each probe in a column contains a specific mismatch position called the "substitution" position where each of the four possible nucleotides (A, C, T, G) are substituted into the probe sequence. Probes in columns for interrogating wildtype sequence are designed to be perfectly complementary to wildtype sequence except at the substitution position and the same is true for probes interrogating mutant sequence. Optimized hybridization conditions facilitate annealing of the fluorescently labeled DNA target to the probe that best matches its sequence. The patterns in the hybridization images reliably indicate whether mutant and/or wildtype targets are present.



GeneChip® CYP450 Product Characteristics

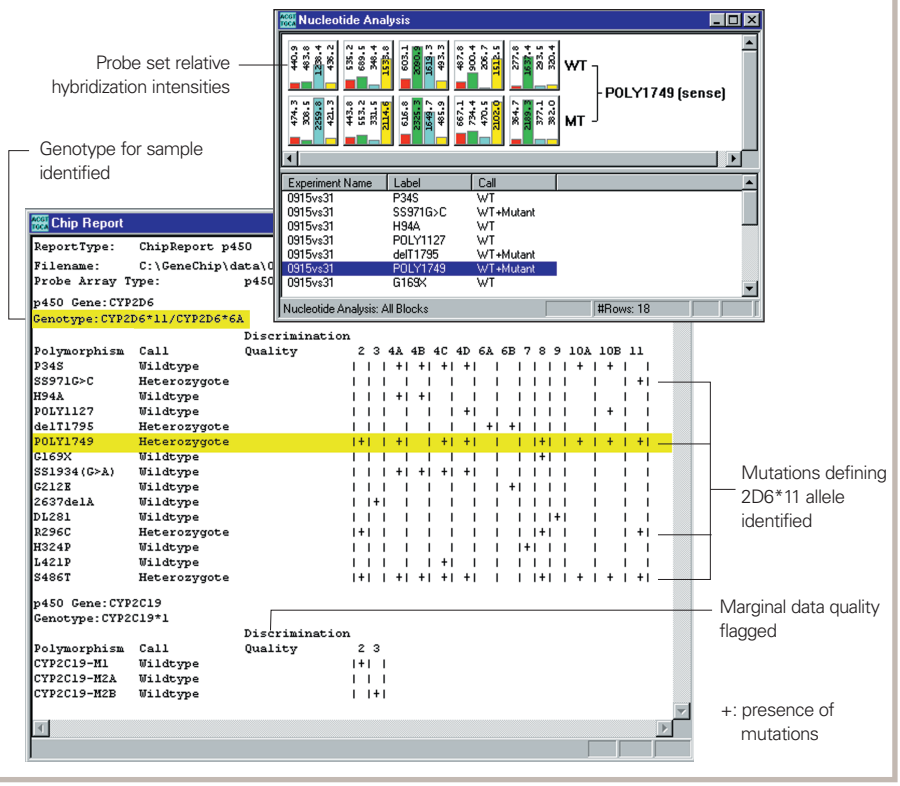
Genes analyzed	CYP2D6 and CYP2C19
Alleles identified	CYP2D6: *2, *3, *4, *6, *7, *8, *9, *10, *11 Deletion (*5) homozygotes 2C19: *2, *3
Time from purified DNA to data	5 hrs
Maximum steady state throughput	4 samples/hour**

**Maximum steady state throughput based on one GeneChip® analysis system.

Figure 2. Microarray Suite Software performs the following major functions:

- Automates control of the scanner and the GeneChip® Fluidics Station
- Acquires and processes hybridization intensity data
- Displays hybridization image
- Displays hybridization intensity data
- Displays nucleotide base calls for each mutant site
- Prepares customizable summary report

Microarray Suite Nucleotide Analysis Window and Report



Ordering Information

GeneChip® CYP450 Assay

Probe Arrays

900137 *GeneChip CYP450 Arrays - One Box (each box contains 5 arrays)*

Reagents

900140 *GeneChip CYP450 Reagent Kits (sufficient for 25 samples) Includes CYP450 Primer Set, Reference DNA, Fragmentation Reagent, and Control Oligonucleotide F1.*

900138 *GeneChip CYP450 Primer Set (sufficient for 25 samples) Contains PCR primers for multiplex human 2D6 gene amplification, exons 1-9; and human 2C19 gene amplification, exons 4-5.*

To Order

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